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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/616,252	07/08/2003	Satoshi Kitamura	SIC-03-017	9496

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EXAMINER	
GRANT, ROBERT J	

ART UNIT	PAPER NUMBER
2838	

DATE MAILED: 04/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/616,252	KITAMURA, SATOSHI	
	Examiner	Art Unit	
	Robert Grant	2838	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 January 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *08 July 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claim1-3 and 5-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schwaller (US 5,247,430) in view of Mohan (US 5,572,415).

As to Claim 1, Schwaller discloses charging apparatus that charges with voltage from an alternating current bicycle dynamo (figure 1), wherein the charging apparatus comprises: a rectifying circuit for rectifying the alternating current from the bicycle dynamo (Column 3, lines 11-19). Schwaller does not expressly disclose the rectifier configuration as described in claim 1. Mohan discloses a full-wave charging element operatively coupled to the rectifying circuit for charging during both positive and negative half-cycles of a dynamo (Figure 2,element 20); a first half-wave charging element operatively coupled to the rectifying circuit in parallel with the full-wave charging element, wherein the first half-wave charging element charges during positive half-cycles of said dynamo (Figure 2, element D1); and a second half-wave charging element operatively coupled to the rectifying circuit in parallel with the full-wave charging element, wherein the second half-wave charging element charges during negative half-cycles of the dynamo (Figure 2, element D2). It would have been obvious to a person having ordinary skill in the art at the time of this invention to

combine the bicycle dynamo of Schwalller with the rectifying circuit of Mohan, for the benefit of a more effective charging system.

As to Claim 11, Schwaller discloses charging apparatus that charges with voltage from an alternating current bicycle dynamo (figure 1), wherein the charging apparatus comprises: a rectifying circuit for rectifying the alternating current from the bicycle dynamo (Column 3, lines 11-19). Schwaller does not expressly disclose the rectifier configuration as described in claim 1. Mohan discloses a full-wave charging element operatively coupled to the rectifying circuit for receiving and storing charging during both positive and negative half-cycles of a dynamo (Figure 2,element 20, Load); a first half-wave charging element operatively coupled to the rectifying circuit in parallel with the full-wave charging element, wherein the first half-wave charging element receiving and storing charges during positive half-cycles of said dynamo (Figure 2, element D1, C1); and a second half-wave charging element operatively coupled to the rectifying circuit in parallel with the full-wave charging element, wherein the second half-wave charging element receiving and storing charges during negative half-cycles of the dynamo (Figure 2, element D2, C2); wherein the full-wave chagrining element, the first half-wave charging element and the second half-wave charging element all receive and store charge from the rectifying circuit (Elements 20, C1, C2, and Load); wherein the full charging element receives and stores charge from the first half-wave charging element and from the second half-wave charging element in addition to the charge received from the rectifying circuit (Elements C1, C2, and load). It would have been

obvious to a person having ordinary skill in the art at the time of this invention to combine the bicycle dynamo of Schwalller with the rectifying circuit of Mohan, and have Mohan's Load be a battery, which would make the circuit capable of charging on both the positive and negative half-cycles of the dynamo and therefore allow the bicycle to charge the battery (Mohan's load) no matter how much power is being generated.

As to Claim 2 and 13, Schwaller in view of Mohan disclose the charging apparatus according to claim 1 and 11, and Schwaller further discloses wherein the full-wave charging element comprises a secondary cell (Column 4, lines 55-59).

As to Claim 3 and 14, Schwaller in view of Mohan disclose the charging apparatus according to claim 1 and 11, Mohan discloses wherein the first half-wave charging element is connected in series with the second half-wave charging element (Figure 2, element 20).

As to Claim 8 and 19, Schwaller in view of Mohan disclose the charging apparatus according to claim 1 and 11, Mohan discloses wherein the first half-wave charging element comprises a first electrolytic capacitor (Figure 2, element C1).

As to Claim 9 and 20, Schwaller in view of Mohan disclose the charging apparatus according to claim 8 and 19, Mohan discloses wherein the second half-wave charging element comprises a second electrolytic capacitor (Figure 2, element C2).

As to Claim 10 and 21, Schwaller in view of Mohan disclose the charging apparatus according to claim 9 and 20, Mohan discloses wherein the first electrolytic capacitor is connected in series with the second electrolytic capacitor (Seen in Figure 2, elements C1 and C2).

As to Claim 12, which is dependent upon claim 11, Schwaller in view of Mohan disclose wherein the charge stored in the full-wave charging element is greater than the charge stored if no charge were received from the first half-wave rectifying circuit and from the second half-wave rectifying circuit (Mohan's circuit in figure 2's operation would yield these results).

3. Claims 4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schwaller in view of Mohan as applied to claim 1 above, and further in view of Hanada (US 6,429,623).

As to Claim 4 and 15, Schwaller in view of Mohan disclose the charging apparatus according to claim 1 and 11, but they do not discloses where in the charging element is a double layer capacitor. Hanada discloses the benefit of using a double layer capacitor (Column 1, lines 15-21). It would have been obvious to a person having ordinary skill in the art to use the double layer capacitor as taught by Hanada for the benefit of longer service life, in the charging device as disclosed by Schwaller in view of Mohan.

As to Claim 5 and 16, Schwaller and Mohan in view of Hanada disclose the charging apparatus according to claim 4 and 15, Mohan discloses wherein the first half-wave charging element comprises a first electrolytic capacitor (Figure 2, element C1).

As to Claim 6 and 17, Schwaller and Mohan in view of Hanada disclose the charging apparatus according to claim 5 and 16, Mohan discloses wherein the second half-wave charging element comprises a second electrolytic capacitor (Figure 2, element C2).

As to Claim 7 and 18, Schwaller and Mohan in view of Hanada disclose the charging apparatus according to claim 6 and 17, Mohan discloses wherein the first electrolytic capacitor is connected in series with the second electrolytic capacitor (Seen in Figure 2, elements C1 and C2).

Response to Arguments

4. Applicant's arguments filed 01-03-2006 have been fully considered but they are not persuasive.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in

the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the motivation for the combination of the reference is to use the method, as taught by Mohan of converting alternating current, which is generated by the dynamo of Schwaller, to Direct current in order to charge a battery.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

In response to applicant's argument that Mohan's DC voltage rectifying circuit is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, Schwaller's dynamo generates an alternating current and then the voltage is converted to Direct current in order to charge the battery. Mohan teaches a method of converting an AC voltage into a DC voltage, and therefore, it is analogous art.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Grant whose telephone number is 571-272-2727. The examiner can normally be reached on M-F 8:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Sherry can be reached on 571-272-2084. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RG

Adolf Deneke Berhane
Primary Examiner